

GUIDELINES FOR THE PREVENTION OF BLOODBORNE PATHOGEN DISEASE TRANSMISSION DURING STUDENT ACTIVITIES

The "Guidelines for the Prevention of Bloodborne Infectious Diseases During Student Activities" were developed for use by school corporations as they develop a policy on the use of universal precautions during student athletic, extracurricular, or recreational activities. The purpose of such a policy is to minimize the possibility of transmission of bloodborne pathogens during school athletic events or extracurricular activities.

The guidelines primarily address prevention of the transmission of bloodborne pathogens, such as the Hepatitis B virus (HBV) and the Human Immunodeficiency Virus (HIV). However, school corporations may also want to address common sense precautions against the spread of less serious communicable diseases in a policy.

The guidelines were written with not only obvious contact sports such as football and wrestling in mind, but should be applicable to any activity in which blood may be present due to a student injury.

Guidelines

School corporations should understand that this document contains guidelines for their use in developing local policies. The Indiana State Department of Health, Indiana Department of Education and The Indiana High School Athletic Association strongly recommend that each school corporation develop their own policy regarding the prevention of bloodborne pathogen transmission during school activities.

During school activities in which an injury occurs that results in bleeding, responsible individuals should follow the appropriate guidelines as set forth by their school corporation's bloodborne pathogen exposure control plan.

Bloodborne Pathogens

Bloodborne pathogens, such as HBV, Hepatitis C (HCV), and HIV, are serious infectious agents which are present in blood as well as other body fluids such as semen and vaginal secretions of infected individuals. While there are a number of diseases caused by bloodborne pathogens, HBV, HCV, and HIV infection are the most common.

The hepatitis B and C viruses cause dangerous inflammation of the liver. Some infected individuals become carriers and suffer long-term consequences. Long term carriage can eventually cause cirrhosis of the liver and liver carcinoma. HIV is the virus that causes Acquired Immune Deficiency Syndrome (AIDS). AIDS weakens the immune system, making a person susceptible to infections their immune systems normally would fight off. There is no known cure for AIDS.

The precise risk of HIV transmission during exposure to open wounds or mucous membranes such as eyes, ears, nose and mouth to contaminated blood is not known. However, scientific evidence suggests it is extremely low but not zero.

Although the Centers for Disease Control and Prevention (CDC) does not give exact statistical information on transmission of HBV through open wound or mucous membrane exposure, CDC does state that these exposures account for a small proportion of reported cases of hepatitis B infection in the United States.

Therefore students/athletes, coaches, and officials must understand that while it is theoretically possible for HIV and HBV to be transmitted by blood from one individual through the open wound or mucous membrane of another individual, the probability of this occurring during school activities is

low. The chance of transmission of HIV and HBV in this manner, however is not zero. Precautions should be taken to ensure that no transmission can occur.

Preventing Transmission of Bloodborne Pathogens during School Athletic Events and Extracurricular Activities

School corporations should assure that a person is designated at each athletic, extracurricular, or recreational activity event to assist injured students. Athletic trainers, coaches, or any employee whose job duties include assisting injured students/athletes should use disposable examination gloves to prevent exposure to blood when treating athletes who are bleeding, be offered preexposure prophylaxis with hepatitis B vaccine, and be covered under the school's OSHA Bloodborne Pathogen Exposure Control Plan.

If followed, the measures listed below ensure that the risk of transmission of bloodborne pathogens during school activities remains extremely low:

1. For students/ athletes participating in activities that involve person-to-person contact, skin wounds (such as scratches, abrasions, and lacerations) and potentially infectious skin lesions (such as weeping sores) should be securely covered with bandages or simple wraps to prevent leakage of blood or serous fluid during the activity.
2. The injured student/ athlete should perform his/her own wound care whenever possible. Barriers, such as latex or other protective gloves, should be used by those providing care.
3. Students/ athletes should be instructed not to handle other people's blood. Students should not be asked to assist in controlling a bleeding injury, clean blood contaminated environmental surfaces (such as wrestling mats), or handle contaminated laundry.
4. Lacerations or wounds with substantial bleeding (more than superficial scratches or small lacerations), should be treated promptly. Blood on the skin of the injured student/athlete and on that of other participants should be washed off thoroughly with soap and water or with premoistened towelettes. The injured student/athlete should be permitted to return to the activity only after the wound has been securely covered or wrapped.
5. If clothing or equipment or wound bandage appears to be wet with blood or if blood has penetrated both sides of a uniform fabric, the equipment or clothing should be changed and blood on the skin should be washed (by the injured student/ athlete) as soon as possible. Small amounts of dried blood on clothing or equipment do not constitute a risk of transmission of bloodborne pathogens, therefore a change of uniform is not necessary.
6. Skin contaminated with blood should be washed with soap and water. Although liquid chemical disinfectants effective against specific bloodborne pathogens and other micro-organisms are widely available, such disinfectants are not intended for direct contact with the skin. Direct physical contact with such agents may result in skin irritation or other toxic reactions. Also, these disinfectants are not intended for and may not be effective for disinfecting athletic uniforms while they are being worn by athletes.
7. Disposable toweling should be used to clean all environmental surfaces when blood is present. The surface should then be cleaned with tuberculocidal germicide registered with the Environmental Protection Agency (EPA) and used according to the label instructions or a 10% household bleach solution (1 part household bleach mixed with 9 parts of water) mixed within 24 hours of use. These measures are effective for most surfaces. Surfaces should be allowed to dry sufficiently to prevent possible injuries due to slipping during subsequent activities.

NOTE: Disposable towels are recommended for use in all cleanup. Gloves should be worn by individuals performing cleanup procedures. Towels, latex or protective gloves and other materials used in cleanup, as well as any disposable materials used to stem bleeding, should be placed in a plastic bag which can be tightly secured. Most waste will not meet the requirements for regulated waste, thus can be disposed of in the regular trash. If the following conditions are met the waste must be disposed of in accordance with the Indiana Infectious Waste Rule:

- A. Blood can be released from the contaminated material when squeezed.
- B. Caked or dried blood can be released from the contaminated material when handled.

8. Individuals whose job duties do not include assisting injured students /athletes should be instructed not to handle blood but should contact the proper individual to assist the student /athlete.
9. After each activity, any equipment or uniform/clothing soiled with blood should be laundered. Items soiled with blood should remain separate from non-contaminated items. Items soiled with blood (i.e. cloth towels) should be placed in the laundry immediately after soiling occurs. Standard laundry cycles should be used according to the washer and detergent manufacturers' recommendations. Laundry personnel should use appropriate physical barriers, such as protective gloves, to prevent contact with soiled laundry. If school personnel handle laundry, the personnel should be offered pre-exposure prophylaxis with hepatitis B vaccine and be covered under the school's OSHA Bloodborne Pathogen Exposure Control Plan.
10. Although bloodborne pathogens have not been shown to be transmitted by contact with saliva; towels, cups, and water bottles should not be shared. Respiratory and other illnesses can be transmitted by contact with these items.

Student/Athlete Exposure Follow-up:

Since there is potential for students to experience exposure to blood (i.e. another person's blood on a student /athlete's open sore), the school should have a written policy regarding the reporting of a student's exposure to blood. The policy may include, but not be limited to, reporting and notification of the parent with a request that the parent notify the family physician of the exposure so that adequate medical follow-up can occur.

Indiana State Department of Health. 1993. "Universal Precaution Rule." 410 IAC 1-4.

Indiana State Department of Health. 1989. "Indiana Infectious Waste Rule." 410 IAC 1-3.

Kansas State High School Activities Association. 1993. "Guidelines for the Prevention of Serious Infectious Diseases in High School Athletics."

Mast, E. E., R. A. Goodman, W. W. Bond, M. S. Favero and D. P. Drotman. 1995, "Transmission of Bloodborne Pathogens During Sports: Risk and Prevention." *Annals of Internal Medicine* 122(4): 283-285.

Occupational Safety and Health Administration. 1991. "Occupational Exposure to Bloodborne Pathogens," Final Rule. *Federal Register* 56:64005-182.

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